

amended to indicate that the present application is a continuation-in-part of an earlier filed application.

In the office action the Examiner stated that the oath or declaration was defective because all inventors failed to indicate the date of signing of the declaration. The undersigned attorney is currently awaited the fully executed declarations and will forward them to the United States Patent and Trademark Office as soon as the declarations are received. ✓

The Examiner also indicated that the drawings in this application was objected to by the Draftsperson. The applicants respectfully defer formal correction of the noted defect until application is allowed by the Examiner. ✓

In the official action the Examiner rejection claims 1-12 under 35 U.S.C. § 112, second paragraph.

Claims 2-12 were rejected for having improper antecedent basis problems. In addition, claims 2-12 were also rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. By way of this amendment claims 2-12 have been amended to provide proper antecedent basis and to definitely and distinctly claim the subject matter of the invention. ✓

It is respectfully submitted that claims 1-12 as amended do not introduce new matter, hence entry and consideration of the same is respectfully solicited.

The Examiner also rejected claim 1 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential structural cooperative relationship of elements. Specifically, the Examiner stated that claim 1 fails to specifically define how discrimination and counting of cells can be accomplished using “varying intensities.” The applicant respectfully urges that section (ii) of claim 1 as amended positively requires the fluorescent dye used to label all membranes of erythroblasts.

Additionally amendments have been made to the remaining claims to better define the invention. No new matter has been added.

In view of the amendments made to the claims by way of this amendment, withdrawal of the rejections under 35 U.S.C. 112 is respectfully requested.

Turning now to the rejections on the merits. In the Office Action claims 1-3 and 5-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 5,559,037 (Kim) in view of U.S. Pat. No. 5,047,321 (Loken).

In making the rejection, the Examiner summarily contended: “Kim et. al. discloses a method for the simultaneous and quantitative, flow cytometric analysis of erythroblasts and leukocytes. Kim et. al. specifically disclose raising cytoplasmic permeability of nucleotide fluorescent dye.

As required in claim 1, the present invention is directed to a highly accurate method for discriminating and counting erythroblasts including the steps for staining a hematologic sample using a fluorescent labeled antibody and nucleotide fluorescent dye,

detecting two fluorescent signals and plotting them in two coordinate axes to obtain a two-dimensional distribution chart.

The above- mentioned staining technique is conducted by staining leukocytes with the fluorescent labeled antibody, enhancing a permeability of the erythroblasts to the nucleotide fluorescent dye, and then staining the erythroblasts with the nucleotide fluorescent dye.

In contrast, through Kim (USP5,559,037) describes the staining of the erythroblasts using a nucleotide fluorescent dye similar to that of the present invention, Kim does not utilize either a dye or a fluorescent labeled antibody for staining the leukocytes. In this reference, erythroblasts are discriminated and counted by detecting three parameters on one fluorescent light and two kinds of scattered lights. In short, it is impossible in Kim to discriminate and count the erythroblasts by only detecting two fluorescent lights as disclosed in the present invention.

Therefore, Kim is different from the present invention in that different kinds of parameters are used, in particular Kim does use the fluorescent labeled antibodies required by the claims of the present invention.

Loken (USP5,047,321) describes the use of two kinds of nucleotide fluorescent dyes and one fluorescent labeled antibody as an indispensable requirement. By using the above three dyes, five parameters including three fluorescent lights and two scattered lights are detected. This is an essential requirement of Loken. In addition, referring to erythroblasts particularly in Differential Analysis of Normal Bone Marrow

Cells under item II in columns 9-10, Loken admits that erythroblasts cannot be discriminated accurately. That is, Loken discloses the discrimination of blood cells but does not describe the clear discrimination of the erythroblasts from other cells.

From the above, there is no rational motivation or incentive in combining Kim and Loken. Even if these references are combined, the discrimination of the erythroblasts using the minimum parameters, i.e., two parameters (fluorescent lights), is most unlikely. Furthermore, a person skilled in the art would not be led to select the combination of dyes set forth in the present invention after reading the references that are used to accurately discriminate erythroblasts from other cells until he/she understands that two parameters could be used for such discrimination. This understanding does not come from reading these references but instead from the present disclosure. Thus, it is respectfully suggested that the only way that one skilled in the art can arrive at the present invention is by using the guidance of the specification of the present invention, which is impermissible.

In view of the foregoing one skilled in the art would not be able to arrive at the present invention from reading the references which teach or suggest 3 or 5 parameters for detection. In other words, without the guidance of the specification of the present invention, it is impossible even for a person skilled in the art to select and combine particular dyes from the various dyes disclosed by the references and arrive at the present invention. Therefore, the claim references do not teach or suggest the claimed invention.

Inami et al. (USP5,298,426) describes that a blood sample is stained with a dye for staining erythroblast, a dye for staining basophils and eosinophils and a dye for staining leukocytes, simultaneously. However, the dyes used in Inami et al., particularly the dyes for the leukocytes, are completely different from those of the dyes required by the present invention. In addition, Inami et al. does not describe a two step staining procedure as required by the claims of the present invention. Instead, Inami et al. discriminates the erythroblasts using a combination of scattered light and fluorescent light.

Thus, one skilled in the art would not be led to combine Inami and Loken to arrive at the present invention since the references do not suggest such a combination. Even if these references are combined, it is impossible to arrive at the discrimination of the erythroblasts by detecting two fluorescent lights for the above-described reasons. The claims of the present invention require that two fluorescent light signals be used to discriminate between the two different types of cells described. Therefore, even if the references, which do not suggest or teach the use of two parameters on fluorescent lights for accurate erythroblast detection, are combined, a person skilled in the art would not be led to combine the references to arrive at the present invention. Thus, it is respectfully requested that the rejection of the claims under 103 be reconsidered and withdrawn.

In view of the foregoing, favorable action on the merits, including entry and approval of all amendment and allowance of all claims is respectfully solicited.

Respectfully submitted,

A handwritten signature in cursive script, reading "Leo G. Lenna". The signature is written in black ink and is positioned above a horizontal line.

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